9-1964

Digenetic Trematodes of Fishes as Indicators of the Ecology, Phylogeny and Zoogeography of Their Hosts [Abstract]

Harold W. Manter

University of Nebraska - Lincoln, nemataslg@gmail.com

Published in the *Proceedings of the First International Congress of Parasitology*, volume 1 (September 21-26, 1964, Rome, Italy). Edited by Augusto Corradetti.

Digenetic Trematodes of Fishes as Indicators of the Ecology, Phylogeny and Zoogeography of Their Hosts

Harold W. Manter
University of Nebraska, Lincoln (U.S.A.)

The prevalence and diversity of trematodes of fishes, together with the fact that many of them have considerable host specificity, make them a favorable group for studies of host relationships and zoogeography.

Sometimes a trematode, or other parasite, may have a very local, restricted distribution as compared with that of the host species. In such cases, the parasite serves as a sort of natural "tag" indicating where the particular host has lived, the extent of its travels, its diet, its associates, etc. (i.e. its ecology).

The wide-range or global distribution of trematodes of fishes, disregarding their precise local occurrence, may give evidence of broad paths of dispersal over long periods of time and of contacts and associations of millions of years ago. A clear example of this reflection of ancient times is the striking number of amphi-American species of trematodes in fishes of the tropical American Atlantic and tropical American Pacific.

Trematodes flourish in great abundance in fishes of the Great Barrier Reef, corresponding with the richness of the fish and molluscan populations there. Preliminary examination of these Australian trematodes shows some interesting affinities, particularly to the Caribbean region. The reef-dwelling fish, *Kyphosus* Lacépède, is host to seven or eight distinctive genera of trematodes. Of four species collected from *Kyphosus* in Australia, three are either identical or very closely related to species in *Kyphosus* in the Caribbean; the fourth has a related genus there. These and other examples indicate a more firm and sustained pathway of dispersal than now exists between these widely separated regions. An explanation involving dispersal routes of ancient times seems likely. When our present meagre knowledge is more complete, distribution patterns, both present and ancient, will probably become evident.

The prospect of discovering a new source of information about the long history of life on earth should be a stimulus to taxonomic and zoogeographical research. There is much biogeographical exploration to be done in the Pacific and elsewhere.